#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau



## 

# (43) International Publication Date 28 March 2002 (28.03.2002)

#### **PCT**

# (10) International Publication Number WO 02/024058 A3

(51) International Patent Classification7: A6

A61B 1/00

(21) International Application Number: PCT/IL01/00843

(22) International Filing Date:

6 September 2001 (06.09.2001)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

138632

21 September 2000 (21.09.2000) IL

- (71) Applicant (for all designated States except US): MEDI-GUS LTD. [IL/II.]; 3 HaAmal Street, 84247 Beersheva (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SONNENSCHEIN, Elazar [IL/IL]; 32 Rahavat Yavne, 84800 Beersheva (IL). SONNENSCHEIN, Minelu [IL/IL]; 12 Yelim Street, 85025 Meitar (IL). CHINNOCK, Randal, B. [US/US]; 53 McGilpin Road, Sturbridge, MA 01566 (US).
- (74) Agents: LUZZATTO, Kfir et al.; Luzzatto & Luzzatto, P.O. Box 5352, 84152 Beer-Sheva (IL).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 22 August 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MULTIPLE VIEW ENDOSCOPES

(57) Abstract: The present invention relates to an endoscope comprising two or more optical channels that produce two or more distinct views. The endoscope of the invention is suitable for performing various surgical procedures, including fundoplications, stapling of the stomach for obesity management, bladder neck sling procedures for incontinence management, and other procedures that may benefit from having multiple interior views. Such treatments may be performed percutaneously, or by gaining access via natural body canals such as the esophagus or urethra.



### INTERNATIONAL SEARCH REPORT

Inti Ional Application No PCT/IL 01/00843

			PCT/IL 01/	00843		
A. CLASSIF IPC 7	FICATION OF SUBJECT MATTER A61B1/00					
1.0,						
A	Internal Control Control Control	Man and 500				
According to B. FIELDS:	International Patent Classification (IPC) or to both national classifica	ion and IPC				
	SEARCHED  currentation searched (classification system followed by classification	n symbols)	<del></del>			
IPC 7	A61B	•				
Documentat	ion searched other than minimum documentation to the extent that so	ich documents are inclu	ided in the fields se	arched		
Electronic da	ata base consulted during the international search (name of data base	e and, where practical	, search terms used)	<del></del>		
EPO-Int	ternal, WPI Data					
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT					
Category *	Citation of document, with indication, where appropriate, of the rele	vant passages		Relevant to claim No.		
Х	WO 91 00049 A (KARL STORZ GMBH &	-	1			
	10 January 1991 (1991-01-10) page 17, line 6 -page 23, line 14	ŀ				
	figures 1-6C					
Α	•			2,4,5		
х	DE 42 41 938 A (KARL STORZ GMBH &	(0 )		1		
^	16 June 1994 (1994–06–16)		1			
	column 7, line 41 -column 9, line					
Υ	figures			7		
·				•		
Υ	WO 00 53102 A (GAZAYERLI)			7		
İ	14 September 2000 (2000-09-14) page 7, line 20 -page 9, line 11					
	page 19, line 13 -page 23, line 3			i		
	figures 1-2B					
A				8		
	_	/				
X Furth	ner documents are listed in the continuation of box C.	V Patent familie	members are listed	in anney		
		X Patent family				
		"I" later document pub or priority date an	lished after the inte d not in conflict with			
consid	ant defining the general state of the art which is not leved to be of particular relevance	cited to understan	d the principle or the	eory underlying the		
filing d	ate	ular relevance; the c ered novel or cannot				
"L" document which may throw doubts on priority claim(s) or cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone which is ched to establish the publication date of another claim or any production of the considered to comment of particular relevance; the claimed invention						
"O" docume	ent referring to an oral disclosure, use, exhibition or	cannot be conside document is comb	ered to involve an im- placed with one or mo	venilve step when the ore other such docu-		
	ent published prior to the international filling date but	ments, such combin the art.	dination being obvious	us to a person skilled		
	document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family  te of the actual completion of the international search  Date of mailing of the international search report					
Pate of the	асциа сопіренов от нів інтегнатова) search	Date of mailing of	tne international sea	srch report		
2	1 June 2002		- R	07. 2002		
Name and n	nailing address of the ISA	Authorized officer	u.	U1. 2002		
	European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk					
l	Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Chen, A				



Int onal Application No PCT/IL 01/00843

ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
US 3 889 662 A (MITSUI) 17 June 1975 (1975-06-17) column 4, line 4 - line 50	1,6
WO 89 11252 A (UNIVERSITY OF CONNECTICUT) 30 November 1989 (1989-11-30) page 19, line 3 -page 24, line 11 figures 1,2,4,5	1-3
US 5 776 049 A (TAKAHASHI) 7 July 1998 (1998-07-07) column 5, line 3 -column 7, line 16 column 9, line 19 -column 10, line 19 figures 2A,B,9A,B	4
US 5 395 030 A (KURAMOTO ET AL.) 7 March 1995 (1995-03-07) column 5, line 56 -column 8, line 4 column 9, line 50 -column 13, line 45 column 26, line 43 -column 28, line 19 figures 1,6-14,58A-59C	7-10
	US 3 889 662 A (MITSUI) 17 June 1975 (1975-06-17) column 4, line 4 - line 50 W0 89 11252 A (UNIVERSITY OF CONNECTICUT) 30 November 1989 (1989-11-30) page 19, line 3 -page 24, line 11 figures 1,2,4,5 US 5 776 049 A (TAKAHASHI) 7 July 1998 (1998-07-07) column 5, line 3 -column 7, line 16 column 9, line 19 -column 10, line 19 figures 2A,B,9A,B US 5 395 030 A (KURAMOTO ET AL.) 7 March 1995 (1995-03-07) column 5, line 56 -column 8, line 4 column 9, line 50 -column 13, line 45 column 26, line 43 -column 28, line 19

international application No. PCT/IL 01/00843

### INTERNATIONAL SEARCH REPORT

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  .
2. Claims Nos.: because they relate to parts of the international Application that do not comply with the prescribed requirements to such an extent that no meaningful international Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)
This international Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest  The additional search fees were accompanied by the applicant's protest.  X  No protest accompanied the payment of additional search fees.

### FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-6

Endoscope comprising two or more separate optical channels, where each optical channel comprises an objective lens for focusing the image on to an image sensor chip. Each objective lens is located at a different position along the length of the endoscope.

2. Claims: 7, 8-10

Endsocope and surgical stapler combination.



Information on patent family members

Int Ional Application No
PCT/IL 01/00843

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
WO 9100049 A	10-01-1991	DE AT	3921233 A1 120628 T	14-02-1991 15-04-1995
		WO	9100049 A1	10-01-1991
		DE	59008855 D1	11-05-1995
		EP	0434793 A1	03-07-1991
		JP	4500768 T	13-02-1992
		US	5166787 A	24-11-1992
DE 4241938 A	16-06-1994	DE	4241938 A1	16-06-1994
		WO	9413190 A1	23-06-1994
		US	2002007110 A1	17-01-2002
WO 0053102 A	14-09-2000	US	6159146 A	12-12-2000
		AU	3623300 A	28-09-2000
		MO	0053102 A1	14-09-2000
US 3889662 A	17-06-1975	DE	2425827 A1	19-12-1974
WO 8911252 A	30-11-1989	US	4938205 A	03-07-1990
		CA	1316252 A1	13-04-1993
•		EP	0416025 A1	13-03-1991
		JP	4500321 T	23-01-1992
		WO	8911252 A1	30-11-1989
		US	5109276 A	28-04-1992
		US	5200838 A	06-04-1993
		US	5172685 A	22-12-1992
		US	5200819 A	06-04-1993
US 5776049 A	07-07-1998	JP	3220538 B2	22-10-2001
		JP	6194580 A	15-07-1994
		US	5522789 A	04-06-1996
US 5395030 A	07-03-1995	JP	6047050 A	22-02-1994